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Examiner Amina S. Khan
US20010201(094342.0029)

REMARKS

The Office Action mailed on May 3, 2007 has been reviewed and the Examiner's comments have been carefully considered. Claims 14-78 were previously canceled. Therefore, claims 1-13 and 79-95 are now pending in this case.

Applicants hereby amend independent claim 1 and dependent claims 84-86. Applicants are making the amendment to insert the word "flow" to recite the term "cross flow membrane filter" as a matter of clarity of the claim and to place the claim in condition for allowance or appeal. The phrase "cross flow membrane filter" is present in dependent claim 10. In addition, filters having cross flow membrane are indicated throughout the written description, such as for example, in paragraphs [0076], [0080], [0081], [0084], [0087], [0088], [0094], and [0110]. The cross flow membrane filter 114 is shown in FIGS. 8 and 9 and has a proximal end 126 and a distal end 128.

Examiner Interview

Applicants and Applicants' undersigned attorney would like to thank Examiner Khan, Primary Examiner Douyon, and Supervisory Primary Examiner McGinty for time allotted for a personal interview on July 31, 2007. During the interview, an inventor, Mr. Tremitchell Wright, explained the invention and the cross flow membrane filter. Mr. Wright brought a sample of the cross flow membrane filter such as that disclosed in FIGS. 8 and 9 of the patent application. The interview did not result in an agreement being reached.

35 USC §103 Rejections

I. Claims 1, 3, 4, 6-8, 10, 12, 13, 79, 82, 85, 87, 88 and 93-95 are not obvious under 35 USC §103(a) and over Estes et al. (US 2002/0056164) in view of Berndt et al. (US 6,086,635)

The USPTO states that "It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the methods taught by Estes, et al. by incorporating the cross flow and spin disc filters taught by Berndt because Berndt teaches the water and

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particulate removal benefits and working fluid purification benefits imparted by these filters to non-aqueous dry cleaning fluids in dry-cleaning applications.

Applicants respectfully submit that a prima facie case of obviousness under 35 USC §103 has not been established. Applicants maintain that the filters of Berndt et al. are of different 1) structure, 2) mechanism, and 3) effect compared to that of the cross flow membrane filter recited in claims 1, 10, and 84-86. Berndt et al. discloses a diatomaceous earth filter. Berndt et al. also discloses a coalescent media draped at initial termination of an inlet tube 52 or coalescent media 64 positioned within filter housing 62 (col. 5, lines 15-60). There is no teaching in Berndt et al. in which either of these filters produce a permeate and a condensate routed along two different flow paths or are cross flow in which the fluid flows tangential to the cross flow membrane. More specifically, filter 62 has one inlet and one outlet and not two outlets for the permeate and condensate, respectively. The elements of Estes et al. and Berndt et al. do not amount to Applicants invention as claimed.

In addition, Applicants respectfully submit that with respect to claims 3, 4 12, 13, 94 and 95, the spin disc with diatomaceous earth disclosed in Berndt et al. does not treat vapor from the working fluid by removing at least one of said working fluid and water vapor from the air stream, as recited in claims 3 and 12. The spin disc filter of Berndt et al. is one of the filters described with respect to filter 18, and filters the pumped liquid solvent prior to its entry to the cleaning basket 10 (col. 4 lines 5-10). The filter 18 can also filter liquid resulting from condensed vapors (col. 4, lines 25-26). The still 24 which can contain a mixture of siloxane, water and contaminants further removes contaminants through vaporization. The vapors from the still 24 are condensed by the coils of a still vapor condenser 26 prior to entering the separator 28 and Berndt et al. does not teach that these vapors are condensed by the spin disc.

Accordingly, applicants respectfully request withdrawal of the rejection of claims 1, 3, 4, 6-8, 10, 12, 13, 79, 82, 85, 87, 88 and 93-95 which are believed to be in condition for allowance.

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II. Claims 2, 5, 7, 11, 80, 81 and 83 are not obvious over 35 USC §103(a) as being unpatentable over Estes et al. (US 2002/0056164) in view of Berndt et al. (US 6,086,635) and further in view of Radomyselski et al. (US 2003/0226214).

The USPTO states that, "It would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the methods taught by Estes et al. and Berndt et al. by incorporating the absorbent bed filters, contaminant removal values and surfactants taught by Radomyselski et al. because Radomyselski et al. teaches contaminant removal benefits imparted by repeated exposure of the working fluid to these filters in dry-cleaning applications and the facilitated removal of contaminants."

Applicants respectfully submit that claims 2, 5, 7, 11 80 and 81 are ultimately dependent from claim 1 and are not obvious over the cited references for the reasons stated above with regards to claim 1.

Radomyselski et al. disclose absorbent filters which result in "dead-end" filtration. Therefore the combination of Estes et al., Berndt et al, and Radomyselski et al. cannot produce a permeate and a condensate routed along two different flow paths.

Claim 83 is ultimately dependent from claim 8 and is not obvious over the cited references for the reasons stated below.

Accordingly, applicants respectfully request withdrawal of the rejection of claims 2, 5, 7, 11, 80, 81 and 83 which are believed to be in condition for allowance.

III. Claims 84-86, 89 and 92 are rejected under 35 USC §103(a) as being unpatentable over Estes et al. (US 2002/0056164), Radomyselski et al. (US 2003/0226214) and Berndt et al. (US 6,086,635), as applied to the claims above, and further in view of Radomyselski et al. (US2005/0000897)

The USPTO states that it would have been obvious to one of ordinary skilled in the art "to modify the methods taught by Estes et al., Berndt et al. and Radomyselski et al., by incorporating ceramic or polymeric filters taught by Radomyselski '897 because Radomyselski

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‘897 teaches enhanced contaminant removal benefits imparted by temperature lowering and improved filtration provided by ceramic and polymeric filters.’

Applicants respectfully submit that claims 84-86, and 89 are ultimately dependent from claim 1 and are not obvious over the cited references for the reasons stated above with regards to claim 1.

In addition Radomyselski et al. ('214) disclose absorbent filters which result in “dead-end” filtration. Therefore the combination of Estes et al., Berndt et al, and Radomyselski et al. cannot produce a permeate and a condensate routed along two different flow paths as mentioned above with respect to claims 2, 5, 7, 11 80 and 81.

In addition, Radomyselski et al. ('897) do not recite the same pore size of the membrane recited in claim 86. The pore size can effect at least the flow of the fluid and the degree of separation resulting in the permeate and concentrate. The USPTO provides no basis for the conclusion that the ranges are close enough such that one skilled in the art would have expected them to have the same properties.

Claim 92 is ultimately dependent from claim 8 and is not obvious over the cited references for the reasons stated below.

Accordingly, applicants respectfully request withdrawal of rejection of claims 84-86, 89 and 92 which are believed to be in condition for allowance.

IV. Claim 90 is rejected 35 USC §103(a) as being unpatentable over Estes et al. (US 2002/0056164), in view of Berndt et al. (US 6,086,635), as applied to the claims above, and further in view of Hallman (US2003/0196277)

The USPTO states it would have been obvious to one of ordinary skilled in the art “to modify the methods taught by Estes and Berndt by incorporating the water absorbent media taught by Hallman because Hallman teaches efficient contaminant removal benefits imparted by exposure of the working fluid to these filters in dry-cleaning applications and efficient regeneration of dry cleaning fluids.”

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Applicants respectfully submit that claim 90 is ultimately dependent from claim 1 and is not obvious over the cited references for the reasons stated above with regards to claim 1.

Accordingly, applicants respectfully request withdrawal of rejection of claim 90 which is believed to be in condition for allowance.

V. Claim 91 is rejected under 35 USC §103(a) as being unpatentable over Estes et al. (US 2002/0056164), Berndt et al. (US 6,086,635) and Radomyseiski et al. (US 2003/0226214) as applied to the claims above, and further in view of Hallman (US2003/0196277)

The USPTO states that it would have been obvious to one of ordinary skilled in the art to modify the methods taught by Estes, Berndt and Radomyselski by incorporating the water absorbent media taught by Hallman because Hallman teaches efficient contaminant removal benefits imparted by exposure of the working fluid to these filters in dry-cleaning applications and efficient regeneration of dry cleaning fluids."

Applicants respectfully submit that claim 91 is ultimately dependent from claim 1 and is not obvious over the cited references for the reasons stated above with regards to claim 1.

Accordingly, applicants respectfully request withdrawal of claim 91 which is believed to be in condition for allowance.

VI. Claims 8, 9, 82 and 83 are not obvious over 35 USC §103(a) over Estes et al. (US 2002/0056164) in view of Radomyselski et al. (US 2003/0226214).

The USPTO states that, "It would have been obvious to one of ordinary skilled in the art at the time the invention was made to modify the methods taught by Estes et al. by incorporating contaminant removal levels and dual filters including absorbent type filters taught by Radomyselski et al. because Radomyselski et al. teaches the benefits of dual filtering in providing low contaminant levels thus enhanced cleaning in subsequent wash cycles." In addition, the USPTO states that Estes clearly teaches capturing and condensing the working fluid and filtering it to separate the performance enhancers.

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Applicants respectfully submit that Estes et al. teach, in paragraph [0066], that the washing chamber is heated at step 127 to vaporize any remaining solvent on the fabric. The vaporized working fluid is captured and condensed at step 128 and the pressure is decreased at step 129 to separate the IWF from the performance enhancer. In this embodiment of Estes et al. it is the vaporization of the solvent that decreases the dissolved soils in the working fluid. Claim 8 recites a method which includes cooling the working fluid for decreasing the dissolved soils in the working fluid.

Accordingly, Applicants respectfully request withdrawal of the rejection of claim 8 and claims 9, 82 and 83, dependent therefrom, and which are believed to be in condition for allowance.

VII. Claims 12 and 13 are not obvious 35 USC §103(a) over Estes et al. (US 2002/0056164) in view of Radomyseiski et al. (US 2003/0226214) and further in view of Berndt et al. (US 6,059,845).

Claims 12 and 13 stand rejected. The USPTO states that it would have been obvious to one of ordinary skilled in the art to modify the methods taught by Estes et al. and Radomyselski et al. to incorporate the spin discs taught by Berndt et al. because Berndt et al. teaches recovering condensed vapors and filtering the solvent using diatomaceous earth in combination with a spin disc (column 3, line 30 to column 4, lines 15-47).

Applicants respectfully submit that the spin disc filter of Berndt et al. is one of the filters described with respect to filter 18, which filters the pumped liquid solvent prior to its entry to the cleaning basket 10 (col. 4 lines 5-10). The filter 18 can also filter liquid resulting from condensed vapors (col. 4, lines 25-26). The still 24 can contain a mixture of siloxane, water and contaminants and further removes contaminants through vaporization. The vapors from the still 24 are condensed by the coils of a still vapor condenser 26 prior to entering the separator 28. Applicants respectfully submit that the spinning disk of Berndt et al. does not treat vapor from the working fluid by removing at least one of said working fluid and water vapor from the air

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stream as recited in claims 12 and 13.

Accordingly, applicants respectfully request withdrawal of claim 12 and 13 which are believed to be in condition for allowance.

Conclusion

In summary, Applicants believes that this Amendment is fully responsive to the Office Action mailed on May 3, 2007, and that Applicants' claims include features that patentably define over the cited references. Based on the amendments to this application and the foregoing discussion, it is respectfully requested that claims 1-13 and 79-95 of this application be found in condition for allowance. If the Examiner believes there are any further matters, which need to be discussed in order to expedite the prosecution of the present application, the Examiner is invited to contact the undersigned.

In the event there are any fees necessitated by the foregoing communication, please charge such fees to our Deposit Account No. 50-0959 referencing our Docket No. US20010201 (094342.0029).

Respectfully submitted,
ROETZEL & ANDRESS

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